UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,339	03/12/2004	Masahiro Kakehi	250307US0DIV	6720

22850 7590 06/22/2009

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
SAIDHA, TEKCHAND	

ART UNIT	PAPER NUMBER
1652	

NOTIFICATION DATE	DELIVERY MODE
06/22/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

RECORD OF ORAL HEARING

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MASAHIRO KAKEHI, YOSHIHIRO USUDA,
YUKIKO TABIRA, and SHINICHI SUGIMOTO

Appeal 2008-005697
Application 10/798,339
Technology Center 1600

Oral Hearing Held: March 19, 2009

Before DEMETRA J. MILLS, LORA M. GREEN, and FRANCISCO C. PRATS, *Administrative Patent Judges*.

APPEARANCES:

ON BEHALF OF THE APPELLANT:

JAMES J. KELLY, ESQUIRE
Oblon, Spivak, McClelland, Maier
& Neustadt, P.C.
1940 Duke Street
Alexandria, Virginia 22314

The above-entitled matter came on for hearing on Thursday, March 19, 2009, commencing at 9:23 a.m., at The U.S. Patent and

Trademark Office, 600 Dulany Street, Alexandria, Virginia, before Laurel P. Platt, Registered Diplomate Reporter, Notary Public.

P R O C E E D I N G S

THE CLERK: This is Calendar Number 40, Appeal Number 2008-5697. Mr. James Kelly, counsel for Appellant.

MR. KELLY: Good morning, Your Honors.

JUDGE MILLS: Good morning. Just to let you know, we are familiar with the issues in the case, and you have 20 minutes. You may begin when you're ready.

MR. KELLY: Okay. The Examiner has identified three references. Two, I think, stand out as the most important, the Thaller and the Cowman references.

Certainly the references describe the cloning of the two genes, the ushA and the aphA genes that we have recited in our claim. But it's our position that neither reference suggests using the sequences in such a way to decrease activity expression of these genes in an E. coli to improve the production of a nucleoside 5'-phosphate ester.

The one limitation at the end of Claim 9 that the Examiner has it seems to me ignored is the limitation, the feature that the 5'-nucleotidase activity in the periplasm of these cells is substantially eliminated. It's our argument that that observation by our Inventers was a surprising and unexpected result when they were doing the work.

Both references, really, when you look at them, lead away from actually doing what we are claiming because the references talk about

overproducing the amount of enzyme, and both references state that having increased expression of these enzymes having excessive level of the activity that those enzymes provide is not detrimental to the cell.

That's in the counterreference that is on page 285 in the first column in the second full paragraph.

JUDGE PRATS: Correct, but if I may?

MR. KELLY: Sure.

JUDGE PRATS: Basically the Examiner's rationale is if you eliminate the enzymes that cut up the desired product, you accumulate more product, correct?

MR. KELLY: Yes. That's a fair characterization of the Examiner's position.

JUDGE PRATS: Why isn't that a reasonable position?

MR. KELLY: There's no indication that doing that would actually lead to an enhanced production of the product. Obviously, cells are flexed biological systems, and these enzymes have the documented activities that you've just discussed, but there's no indication that actually doing it, when you do it in a cell, would lead to more of the product.

And there's certainly no indication in the references that by decreasing activity in these two genes, you could substantially eliminate the 5'-nucleotidase activity in these cells.

JUDGE PRATS: But from a logical standpoint, if you are trying to get something in a complex system, it seems to me there's an argument to be made, at least the Examiner's argument is that it makes sense you would

want to eliminate those known ways that the product is effectively degraded by the system. Do you see what I'm saying?

MR. KELLY: I think so.

JUDGE PRATS: I mean, that's the position that we are at.

MR. KELLY: Okay. Again, there's no indication or suggestion in the references that you can substantially eliminate all the activity. That's a feature of the claim that I don't think the Examiner has brought up in the final rejection or the reply brief.

JUDGE MILLS: That's not recognized in E. coli that enzyme activity occurs in the periplasmic space?

MR. KELLY: Even if that were true, there might be other enzymes that would be involved in providing this activity. There are obviously the two genes here. There's always a possibility that there are other genes that could provide similar activity. And so the observation that you can substantially eliminate this activity is still surprising.

JUDGE GREEN: So your argument, if I can paraphrase, seems to be that it was surprising that you only had to knock out these two genes to substantially eliminate the 5'-nucleotidase activities, that there weren't other genes also that had that activity?

MR. KELLY: That's certainly one aspect of it.

JUDGE GREEN: There was nothing in the art that would lead you to believe that just knocking out those two genes would give you this result.

MR. KELLY: Certainly nothing that I'm aware of.

JUDGE GREEN: I mean the prior art of record.

MR. KELLY: That's right. Yes. To answer -- someone asked if the Thaller reference recognized periplasmic enzyme activity, and that is true. That's on column 2 at page 197 of the reference.

JUDGE MILLS: The second rejection, adding Matsui, did you have any comments about it?

MR. KELLY: No, in the sense this rejection was really more for dependent Claim 12, that the operon recited in Claim 12 was discussed in the Matsui reference, but the Matsui reference doesn't make up for any of the deficiencies of Thaller. So Claim 9 was allowed, certainly the dependent claims that followed.

JUDGE MILLS: Thank you very much.

(Whereupon, the proceedings at 9:30 a.m. were concluded.)